



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/896,382

06/29/2001

John A. Fee

RIC-00-034

9548

25537

7590

09/21/2004

MCI, INC

TECHNOLOGY LAW DEPARTMENT
1133 19TH STREET NW, 10TH FLOOR
WASHINGTON, DC 20036

EXAMINER

SINGH, DALZID E

ART UNIT

PAPER NUMBER

2633

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/896,382

Applicant(s)

FEE, JOHN A.

Examiner

Dalzid Singh

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-20 and 22-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-20 and 22-30 is/are rejected.
- 7) ☒ Claim(s) 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5-20 and 22-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu (US Patent No. 5,914,798) in view of Simeonidou et al (US Patent No. 6,249,620).

Regarding claims 1 and 27, Liu disclose restoration system for an optical telecommunications network comprising:

monitoring a plurality of physical connections between a first line terminating equipment and a second line terminating equipment (see col. 3, lines 31-33; Liu discloses that terminal equipment or line terminating equipment may be included in the node; in col. 3, lines 7-22 and on Fig. 6A, Liu discloses restoration procedure, therefore it would have been obvious that network nodes or connections are being monitored in order to perform the restoration procedure in case a failure occurred); and

receiving alarm signal from one of the line terminating equipment through a binary alarm interfaces, wherein the binary alarm interface provide alarm and status condition without embedding the alarm and status condition information in traffic-bearing signals (in col. 8, lines 37-38 and lines 61-67, Liu provides alarm and status information from the nodes by non-bearing links which do not carry traffic; it would be obvious that

Art Unit: 2633

there exist an interface to transmit and receive the alarm and status information signal from the nodes; in the specification, page 7 paragraph 24, application disclosed that "binary interface refers to a means for communicating alarms and status conditions ... directly from one network element to another, as opposed to embedding such information in the overhead of a traffic-bearing signal..." Based on this, the alarm and status signal of Liu is communicated by binary interface since the alarm and status signal is not part of the traffic bearing signal); and

reconfiguring the optical network based upon the receiving steps (the optical network is restored based on the receiving of alarm signal; see col. 4, lines 23-44).

Liu differs from this claim in that Liu does not specifically disclose that the optical telecommunication network is used in a submarine system. However, in col. 7, lines 66-67 to col. 8, lines 1-2, Liu discloses that the network which comprises of optical cables may be applied to any network structures. Submarine system, as disclosed by applicant, performs monitoring and reconfiguring of underwater cable or "submarine cable" in which such function is performed on land. Monitoring and reconfiguring of submarine cables is well known. Simeonidou et al is cited to show such well known function. In col. 2, lines 43-53, Simeonidou et al disclose reconfiguring of a submarine branching unit. Therefore, it would have been obvious to an artisan of ordinary skill at the time the invention was made to apply the system of Liu for monitoring and reconfiguring of submarine cable. One of ordinary skill in the art would have been motivated to do such in order to provide global connectivity.

Regarding claims 2, 19 and 28, the combination of Liu and Simeonidou et al differ from the claimed invention in that the combination does not disclose that the reconfiguring step is performed to restore service according to a plurality of classes of services. However, in col. 2, lines 49-57, Simeonidou et al disclose reconfiguration (restoration) to increase capacity according to the customer changing requirements. Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to associate classes of service or provision services to different customer changing requirements. One of ordinary skill in the art would have been motivated to do such in order to prioritize different services.

Regarding claims 3, 12, 20 and 29, as discussed above, the combination discloses that the reconfiguring step is performed to provision services on the submarine cable network (see rejection of claim 2).

Regarding claims 5 and 22, as discussed above Liu discloses receiving alarm signal and reconfiguring are performed by a network management module (OSS); see col. 4, lines 23-44.

Regarding claims 6, 15 and 23, the combination of Liu and Simeonidou et al differ from the claimed invention in that the combination does not disclose that the network management module (OSS) resides within at least one of the first line terminating equipment and the second line terminating equipment. However, it would have been obvious to an artisan of ordinary skill in the art to reside the management system anywhere within the network system such as in the line terminating equipment.

One of ordinary skill in the art would have been motivated to do so in order to provide faster response to a failure that occurs.

Regarding claims 7, 14 and 24, the combination of Liu and Simeonidou et al, differs from the claim invention in that the combination does not specifically disclose that the network management module resides within a switching system. However, it would have been obvious to an artisan of ordinary skill in the art to reside the management system anywhere within the network system such as in the switching system. One of ordinary skill in the art would have been motivated to do so in order to provide faster switching response to a failure that occurs.

Regarding claims 8, 16 and 25, In view of the claim rejection of claim 1, Liu further discloses reconfiguring step for restoration (see col. 6, lines 17-38 and col. 8, lines 35-48) comprising:

- detecting a fault on one of the plurality of physical connections based upon the received alarm signals;

- retrieving restoration information (from a database); and

- rerouting the traffic on the one physical connection to another one of the plurality of physical connections based upon the restoration information.

Regarding claims 9, 17 and 26, combination of Liu and Simeonidou et al disclose capacity reconfiguration in accordance to the customer changing requirement and differs from the claim invention in that the combination does not disclose receiving provisioning data that include capacity requirements of a customer. However, since the system is reconfigured in accordance with customer requirement therefore it

Art Unit: 2633

would have been obvious that the system must received provisioning data that include capacity requirement of a customer in order to change the capacity requirement.

Regarding claim 10, Liu disclose restoration system for an optical telecommunications network comprising:

line terminating equipment configured to monitor a plurality of physical connections (see col. 3, lines 31-33; Liu discloses that terminal equipment or line terminating equipment may be included in the node; in col. 3, lines 7-22 and on Fig. 6A, Liu discloses restoration procedure, therefore it would have been obvious that network nodes or connections are being monitored in order to perform the restoration procedure in case a failure occurred); and

binary alarm interface coupled to the line terminating equipment for providing alarm and status signal, without embedding the alarm and status condition information in traffic-bearing signals (in col. 8, lines 37-38 and lines 61-67, Liu provides alarm and status information from the nodes by non-bearing links which do not carry traffic; it would be obvious that there exist an interface to transmit and receive the alarm and status information signal from the nodes; in the specification, page 7 paragraph 24, application disclosed that "binary interface refers to a means for communicating alarms and status conditions ... directly from one network element to another, as opposed to embedding such information in the overhead of a traffic-bearing signal..." Based on this, the alarm and status signal of Liu is communicated by binary interface since the alarm and status signal is not part of the traffic bearing signal); and

network management module (OSS) configured to receive alarm signal from line terminating equipment via binary alarm interface and to reconfigure the network based upon the receiving steps (the optical network is restored based on the receiving of alarm signal; see col. 4, lines 23-44).

Liu differs from this claim in that Liu does not specifically disclose that the optical telecommunication network is used in a submarine system. However, in col. 7, lines 66-67 to col. 8, lines 1-2, Liu discloses that the network which comprises of optical cables may be applied to any network structures. Submarine system, as disclosed by applicant, performs monitoring and reconfiguring of underwater cable or "submarine cable" in which such function is performed on land. Monitoring and reconfiguring of submarine cables is well known. Simeonidou et al is cited to show such well known function. In col. 2, lines 43-53, Simeonidou et al disclose reconfiguring of a submarine branching unit. Therefore, it would have been obvious to an artisan of ordinary skill at the time the invention was made to apply the system of Liu for monitoring and reconfiguring of submarine cable. One of ordinary skill in the art would have been motivated to do such in order to provide global connectivity.

Regarding claim 11, Liu discloses a database configured to store restoration information (see col. 6, lines 24-26) and differ from the claimed invention in that Liu does not disclose restoration service according to plurality of classes of service. However, in view of the rejection in claim 2, it would have been obvious to an artisan of ordinary skill in the art to associate the reconfiguration database of Liu to restoration services according to plurality of classes of services. One of ordinary skill in the art

would have been motivated to do such in order to provide a feasible way of altering service levels.

Regarding claim 12, Liu discloses that the network management module (OSS) reconfigures the network cable (see col. 4, lines 23-44) and differ from the claimed invention in that Liu does not disclose that the network management modules reconfigures to provision services on the network. However, as discussed above, the combination discloses that the reconfiguring step is performed to provision services on the submarine cable network (see rejection of claim 2).

Regarding claim 18, Liu disclose restoration system for an optical telecommunications network comprising:

monitoring a plurality of physical connections between a first line terminating equipment and a second line terminating equipment (see col. 3, lines 31-33; Liu discloses that terminal equipment or line terminating equipment may be included in the node; in col. 3, lines 7-22 and on Fig. 6A, Liu discloses restoration procedure, therefore it would have been obvious that network nodes or connections are being monitored in order to perform the restoration procedure in case a failure occurred); and

receiving alarm signal from one of the line terminating equipment through a binary alarm interfaces, wherein the binary alarm interface provide alarm and status condition without embedding the alarm and status condition information in traffic-bearing signals (in col. 8, lines 37-38 and lines 61-67, Liu provides alarm and status information from the nodes by non-bearing links which do not carry traffic; it would be obvious that there exist an interface to transmit and receive the alarm and status information signal

from the nodes; in the specification, page 7 paragraph 24, application disclosed that “binary interface refers to a means for communicating alarms and status conditions ... directly from one network element to another, as opposed to embedding such information in the overhead of a traffic-bearing signal...” Based on this, the alarm and status signal of Liu is communicated by binary interface since the alarm and status signal is not part of the traffic bearing signal); and

reconfiguring the optical network based upon the receiving steps (the optical network is restored based on the receiving of alarm signal; see col. 4, lines 23-44).

Liu differs from this claim in that Liu does not specifically disclose that the optical telecommunication network is used in a submarine system. However, in col. 7, lines 66-67 to col. 8, lines 1-2, Liu discloses that the network which comprises of optical cables may be applied to any network structures. Submarine system, as disclosed by applicant, performs monitoring and reconfiguring of underwater cable or “submarine cable” in which such function is performed on land. Monitoring and reconfiguring of submarine cables is well known. Simeonidou et al is cited to show such well known function. In col. 2, lines 43-53, Simeonidou et al disclose reconfiguring of a submarine branching unit. Therefore, it would have been obvious to an artisan of ordinary skill at the time the invention was made to apply the system of Liu for monitoring and reconfiguring of submarine cable. One of ordinary skill in the art would have been motivated to do such in order to provide global connectivity.

Furthermore, it would have been obvious that the system of Liu comprises a computer-readable medium carrying one or more sequences of one or more instructions

for providing network management of a network, the one or more sequences of one or more instructions including instructions which, when executed by one or more processors, cause the one or more processors to perform the step discussed above (see col. 2, lines 9-36 and Figs. 6A-6C and 7-9).

Regarding claim 30, in view of the rejection of claim 2, further it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to associate restoration information based on service level agreement (SLA). One of ordinary skill in the art would have been motivated to do such in order to prioritize different services.

Allowable Subject Matter

3. Claim 31 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

4. Applicant's arguments with respect to claims 1, 10, 18 and 27 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is (571) 272-3029. The examiner can normally be reached on Mon-Fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272--3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DS

September 17, 2004

Dalzid Singh